



**"Revised"**

**APPLICATION**

**FOR**

**U.S. PATENT**

**"With Modifications"**

TITLE: Attachment for Forming Shapes Following Excavation

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**ATTACHMENT FOR FORMING SHAPES FOLLOWING EXCAVATION**

**CROSS-REFERENCE TO RELATED APPLICATIONS**

[1] Not Applicable

**STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR  
DEVELOPMENT**

[2] Not Applicable

**REFERENCE TO A "SEQUENCE LISTING" A TABLE, OR A COMPUTER  
PROGRAM LISTING APPENDIX SUBMITTED ON A COMPACT DISC**

[3] Not Applicable

**FIELD OF THE INVENTION**

[4] This invention pertains to an attachment for forming shapes following excavation. More particularly, this invention pertains to an attachment for vehicles such as skidsteer loaders, back hoes, etc. which can be used in the construction of swimming pool walls, ditches, sidewalks, etc. where curved shapes are required.

**DESCRIPTION OF RELATED ART**

[5] The use of attachments on skidsteer loaders, backhoes and powered excavating equipment to aid in performing various tasks is known. During the excavation of a swimming pool, it is common to use a skidsteer because of its smaller size and maneuverability. Many swimming pools are excavated using a skidsteer and a standard bucket attachment. Skidsteer loaders with a standard bucket attachment are used to remove dirt from a hole in constructing a swimming pool. However, the standard bucket used on skidsteer loaders or back-hoes leave the walls to a swimming pool requiring significant smoothing out or leveling. This smoothing out process is performed manually by workers using shovels. This manual process of smoothing out the walls is time consuming, requires much effort and is costly. In addition, some areas of the country are very rocky and this adds to the difficulty in manually smoothing out the walls.

## **BRIEF SUMMARY OF THE INVENTION**

[6] This present invention is an attachment for vehicles such as skidsteer loaders, back hoes and powered excavators~~other work type vehicles~~ that can be used to quickly smooth out the walls of a swimming pool following the excavation and prior to the steel reinforcement phase. The attachment is connected to the vehicle and transported to the wall of the swimming pool. The attachment is then lifted and placed in contact with the top of the wall of the swimming pool. The attachment is then lowered to the bottom of the wall of the swimming pool making contact with the wall. The invention quickly smoothes the wall surface of the swimming pool by knocking the dirt and other items to the ground or by cutting any tree limb, rock, etc. that may be in contact with the invention. The process of raising and lowering the attachment while making contact may be repeated as necessary to flatten the surface.

[7] This invention significantly reduces and may even eliminate the need for workers to spend time and effort smoothing the walls. This invention significantly reduces the time required to prepare the walls of a swimming pool, ditch, sidewalk, etc. for the steel reinforcement stage. In addition, this invention improves the safety of swimming pool construction by eliminating the exposure of workers to an operating skidsteer loader in the limited swimming pool area.

[8] This invention reduces the costs of building a swimming pool by reducing the number of workers required in the construction process. In addition, the use of the invention will reduce the amount of gunite required in the swimming pool construction process due to the smoothness of the resulting walls.

### **BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)**

[9] FIG.1 is a front perspective view from a slightly elevated view according to one embodiment of the instant invention;

FIG.2 is a rear perspective view of the attachment shown in FIG.1;

FIG.3 is an overhead plan view of the attachment shown in FIG.1;

FIG.4 is a front perspective view of the attachment shown in FIG.1 from the same elevation;

FIG.5 is a bottom perspective view of the attachment shown in FIG.1;

FIG.6 is a rear perspective view of the attachment shown in FIG.1 from the same elevation;

FIG.7 is a side plane view of the attachment shown in FIG.1;

FIG.8 is an environmental view illustrating a conventional skidsteer loader with the present invention attached.

### **DETAILED DESCRIPTION OF THE INVENTION**

[10] The present invention now will be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiment set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like elements throughout.

[11] With reference to the drawings, FIG.1 illustrates an attachment according to the instant invention. As illustrated, the attachment includes a curved front surface 11 with beveled edges attached to a base 12. In addition, three support structures 13, 14, and 15 are attached on top of the base 12 and in contact with the curved front surface 11 and the connecting frame 18. A flat surface 19 is connected directly on top of the support

structures 13, 14 and 15. The sides 16 and 17 are connected to the base 12, curved front surface 11, the walls 22 and 23 and the covers 20 and 21.

[12] FIG. 2 shows the connecting frame 18 with 2 large cutouts as well as 2 extensions 24 and 25 with rectangular cutouts for the insertion of the arms of a vehicle, for example a skid steer loader. The extensions 24 and 25 are angled to assist the connection with a vehicle.

[13] FIG. 3 shows the curved front surface 11 that makes contact with the wall of the swimming pool, ditch, etc. and forms the smoothed out walls. The base 12 is where dirt may accumulate as the invention is lowered to the bottom surface of the swimming pool wall. Support structures 13, 14 and 15 are shown from an overhead view.

[14] FIG.4 is a front perspective view of the attachment. The curved front surface 11 makes direct contact with the swimming pool walls.

[15] FIG. 5 is a bottom perspective. The curved front surface 11 as well as the base 12 are shown.

[16] FIG.6 is a rear perspective view that shows the vertical location of the base 12 relative to the curved front surface 11 and the sides 16 and 17. This vertical distance allows the invention to collect dirt at the bottom of the swimming pool after being lowered and to drag the dirt for collection or to be spread along the swimming pool bottom.

[17] FIG. 7 shows a side plane view of the attachment and shows how the extension 24 is angled toward where the skidsteer loader is inserted. Also, the curved front surface 11 is shown.

[18] FIG.8 illustrates a conventional skidsteer loader attached to the invention. The connecting frame 18 is against the skidsteer loader and curved front surface 11 is directed toward the swimming pool wall or ditch wall. The base 12 is parallel to the ground.

## ABSTRACT OF THE DISCLOSURE

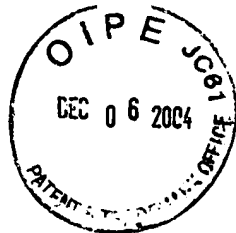
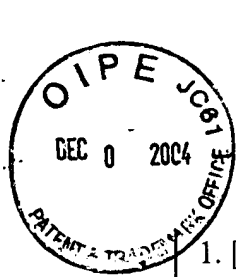
### Revised Abstract with Modifications

[19] ~~This present invention is a~~An -attachment for a skid steer loader, back hoe or ~~powered excavator or other work type vehicle~~ that can be used to quickly smooth out the walls of a swimming pool, ditch, etc. following the excavation and the process of using the attachment. ~~This invention significantly~~The attachment includes a vertical flat surface perpendicular to the ground for smoothing the walls of a swimming pool to mirror the shape of a. The process will reduces the need for workers to spend time and effort smoothing the walls manually; and ~~In addition, this invention improves~~the safety of swimming pool construction, by eliminating the exposure of workers to an operating vehicle in the limited excavated swimming pool area. This invention reduces ~~the costs of building a swimming pool will be by reduced~~significantly by decreasing the number of workers required in the construction process. The process of smoothing walls~~In addition, the use of the invention will reduces the amount of gunite required in the swimming pool construction process and thus improving the economics for the pool builder, due to the smoothness of the resulting walls.~~

**SEQUENCE LISTING**

**[20]** Not Applicable





### Revised Claims with Modifications

1. [Modified] An attachment for securing to a skid steer loader, ~~back hoe, or other work-type vehicle which allows such attachments~~, having;

A connecting frame allowing for the connection to a skid steer loader~~vehicle~~;

A base connected perpendicular to said connecting frame and near the bottom so that the base is directed just above the skid steer loader's~~vehicles~~ connecting point providing support when the attachment is connected to the ~~vehicle~~skid steer loader;

A front surface perpendicular to said base;

~~Said~~A curved front surface connected to the end of the base opposite the connecting frame and vertically such that the ~~curved~~ front surface extends above and below the base and said ~~curved~~ front surface includes a surface for cutting and a

A support structure connected between said connecting frame and said base to provide strength to the attachment.

2. [Modified] An attachment according to claim 1, wherein said ~~curved~~ front surface is shaped as a concave shape.

3. [Modified] An attachment according to claim 1, wherein said ~~curved~~ front surface is shaped as a concave shape with radius ranges from 2 to 24 feet.

4. [Modified] An attachment according to claim 1, wherein said ~~curved~~ front surface is shaped as a convex shape with radius from 2 to 24 feet.

5. [Modified] An attachment according to claim 1, wherein said ~~curved~~ front surface is shaped as a convex shape with radius ranges from 2 to 24 feet.

6. [Modified] An attachment according to claim 1, wherein said ~~curved~~ front surface is shaped as an S shape from 2 to 24 feet in length.

7. [Modified] An attachment according to claim 1, wherein said ~~curved~~ front surface is a straight non-curved surface from 2 to 24 feet in length.

8. [Modified] An attachment for securing to a skidsteer loader having;

A connecting frame with two supporting cutouts towards the bottom for allowing the insertion of skidsteer latches and a clamp mechanism attached toward the top for securing the attachment;

A base connected perpendicular to said connecting frame and near the bottom so that said base is directed just above the ~~vehicleless~~skid steer loader connecting point providing support when the attachment is connected to the skid steer loader~~vehicle~~;

A front surface perpendicular to said base;

~~Said A-curved~~ front surface connected to the end of said base opposite said connecting frame and vertically such that said ~~curved~~-front surface extends above and below said base and said ~~curved~~-front surface includes a beveled edge and a

A support structure connected between the connecting frame and the base to provide strength to the attachment.

9. [Modified] An attachment according to claim 8, wherein said support structure is consists of three perpendicular supports.

10. [Modified] An attachment according to claim 8, wherein said ~~curved~~-front surface is shaped as a concave shape with radius ranges from 2 to 24 feet.

11. [Modified] An attachment according to claim 8, wherein said ~~curved~~-front surface is shaped as a convex shape with radius ranges from 2 to 24 feet.

12. [Modified] An attachment according to claim 8, wherein said ~~curved~~-front surface is shaped as an S-shape from 2 to 24 feet in length.

13. [Modified] An attachment according to claim 8, wherein said ~~curved~~-front surface is a straight non-curved surface from 2 to 24 feet in length.

14. [Modified] A method for smoothing the walls of a swimming pool during the construction of a swimming pool comprising the steps of:

a. connecting a vehicle with an attachment having a connecting frame, a base and a curved front surface with an edge designed for cutting,

b. transporting the attachment to the swimming pool wall<sub>1</sub> ~~and~~

c. raising or lowering the attachment while contacting the wall surface with the curved front surface of the attachment to smooth the walls<sub>1</sub>

d. collecting the dirt and other items at the bottom of the swimming pool or spreading the dirt and other items along the bottom of the pool by utilizing the attachment and

e. repeating the steps above as necessary.

15. [New Claim] An attachment for securing to a backhoe having;

A connecting frame with two supporting cutouts towards the bottom for allowing the insertion of a backhoe's latches and a clamp mechanism attached toward the top for securing the attachment;

A base connected perpendicular to said connecting frame and near the bottom so that the base is directed just above the backhoe's connecting point providing support when the attachment is connected to the backhoe;

A front surface perpendicular to the ground;

Said front surface connected to the end of the base opposite the connecting frame and vertically such that the front surface extends above and below the base and said front surface includes a surface for cutting and a

A support structure connected between said connecting frame and said base to provide strength to the attachment.

16. [New Claim] An attachment according to claim 15, wherein said front surface is shaped as a concave shape with radius ranges from 2 to 24 feet.

17. [New Claim] An attachment according to claim 15, wherein said front surface is shaped as a convex shape with radius ranges from 2 to 24 feet,

18. [New Claim] An attachment according to claim 15, wherein said front surface is shaped as an S shape from 2 to 24 feet in length;

19. [New Claim] An attachment according to claim 15, wherein said front surface is a straight non-curved surface from 2 to 24 feet in length;

20. [New Claim] An attachment for securing to a powered excavator having;

A connecting frame with two supporting cutouts towards the bottom for allowing the insertion of a powered excavator's latches and a clamp mechanism attached toward the top for securing the attachment;

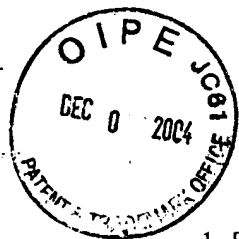
A base connected perpendicular to said connecting frame and near the bottom so that the base is directed just above the powered excavator's connecting point providing support when the attachment is connected to the powered excavator;

A front surface perpendicular to the ground;

Said front surface connected to the end of the base opposite the connecting frame and vertically such that the front surface extends above and below the base and said front surface includes a surface for cutting and a

A support structure connected between said connecting frame and said base to provide strength to the attachment.

21. [New Claim] An attachment according to claim 20, wherein said front surface is shaped as a concave shape with radius ranges from 2 to 24 feet,
22. [New Claim] An attachment according to claim 20, wherein said front surface is shaped as a convex shape with radius ranges from 2 to 24 feet,
23. [New Claim] An attachment according to claim 20, wherein said front surface is shaped as an S shape from 2 to 24 feet in length;
24. [New Claim] An attachment according to claim 20, wherein said front surface is a straight non-curved surface from 2 to 24 feet in length;



### Clean Version of Claims

1. [Modified] An attachment for securing to a skid steer loader having;
  - A connecting frame allowing for the connection to a skid steer loader;
  - A base connected perpendicular to said connecting frame and near the bottom so that the base is directed just above the skid steer loader's connecting point providing support when the attachment is connected to the skid steer loader;
  - A front surface perpendicular to said base;
  - Said front surface connected to the end of the base opposite the connecting frame and vertically such that the front surface extends above and below the base and said front surface includes a surface for cutting and a
  - A support structure connected between said connecting frame and said base to provide strength to the attachment.
2. [Modified] An attachment according to claim 1, wherein said front surface is shaped as a concave shape.
3. [Modified] An attachment according to claim 1, wherein said front surface is shaped as a concave shape with radius ranges from 2 to 24 feet.
4. [Modified] An attachment according to claim 1, wherein said front surface is shaped as a convex shape with radius from 2 to 24 feet.
5. [Modified] An attachment according to claim 1, wherein said front surface is shaped as a convex shape with radius ranges from 2 to 24 feet.
6. [Modified] An attachment according to claim 1, wherein said front surface is shaped as an S shape from 2 to 24 feet in length.
7. [Modified] An attachment according to claim 1, wherein said front surface is a straight non-curved surface from 2 to 24 feet in length.
8. [Modified] An attachment for securing to a skidsteer loader having;
  - A connecting frame with two supporting cutouts towards the bottom for allowing the insertion of skidsteer latches and a clamp mechanism attached toward the top for securing the attachment
  - A base connected perpendicular to said connecting frame and near the bottom so that said base is directed just above the skid steer loader connecting point providing support when the attachment is connected to the skid steer loader;

A front surface perpendicular to said base;

Said front surface connected to the end of said base opposite said connecting frame and vertically such that said front surface extends above and below said base and said front surface includes a beveled edge and a

A support structure connected between the connecting frame and the base to provide strength to the attachment.

9. [Modified] An attachment according to claim 8, wherein said support structure consists of three perpendicular supports.

10. [Modified] An attachment according to claim 8, wherein said front surface is shaped as a concave shape with radius ranges from 2 to 24 feet.

11. [Modified] An attachment according to claim 8, wherein said front surface is shaped as a convex shape with radius ranges from 2 to 24 feet.

12. [Modified] An attachment according to claim 8, wherein said front surface is shaped as an S-shape from 2 to 24 feet in length.

13. [Modified] An attachment according to claim 8, wherein said front surface is a straight non-curved surface from 2 to 24 feet in length.

14. [Modified] A method for smoothing the walls of a swimming pool during the construction of a swimming pool comprising the steps of:

a. connecting a vehicle with an attachment having a connecting frame, a base and a curved front surface with an edge designed for cutting,

b. transporting the attachment to the swimming pool wall,

c. raising or lowering the attachment while contacting the wall surface with the curved front surface of the attachment to smooth the walls,

d. collecting the dirt and other items at the bottom of the swimming pool or spreading the dirt and other items along the bottom of the pool by utilizing the attachment and

e. repeating the steps above as necessary.

15. [New Claim] An attachment for securing to a backhoe having;

A connecting frame with two supporting cutouts towards the bottom for allowing the insertion of a backhoe's latches and a clamp mechanism attached toward the top for securing the attachment;

A base connected perpendicular to said connecting frame and near the bottom so that the base is directed just above the backhoe's connecting point providing support when the attachment is connected to the backhoe;

A front surface perpendicular to the ground;

Said front surface connected to the end of the base opposite the connecting frame and vertically such that the front surface extends above and below the base and said front surface includes a surface for cutting and a

A support structure connected between said connecting frame and said base to provide strength to the attachment.

16. [New Claim] An attachment according to claim 15, wherein said front surface is shaped as a concave shape with radius ranges from 2 to 24 feet.

17. [New Claim] An attachment according to claim 15, wherein said front surface is shaped as a convex shape with radius ranges from 2 to 24 feet,

18. [New Claim] An attachment according to claim 15, wherein said front surface is shaped as an S shape from 2 to 24 feet in length;

19. [New Claim] An attachment according to claim 15, wherein said front surface is a straight non-curved surface from 2 to 24 feet in length;

20. [New Claim] An attachment for securing to a powered excavator having;

A connecting frame with two supporting cutouts towards the bottom for allowing the insertion of a powered excavator's latches and a clamp mechanism attached toward the top for securing the attachment;

A base connected perpendicular to said connecting frame and near the bottom so that the base is directed just above the powered excavator's connecting point providing support when the attachment is connected to the powered excavator;

A front surface perpendicular to the ground;

Said front surface connected to the end of the base opposite the connecting frame and vertically such that the front surface extends above and below the base and said front surface includes a surface for cutting and a

A support structure connected between said connecting frame and said base to provide strength to the attachment.

21. [New Claim] An attachment according to claim 20, wherein said front surface is shaped as a concave shape with radius ranges from 2 to 24 feet,
22. [New Claim] An attachment according to claim 20, wherein said front surface is shaped as a convex shape with radius ranges from 2 to 24 feet,
23. [New Claim] An attachment according to claim 20, wherein said front surface is shaped as an S shape from 2 to 24 feet in length;
24. [New Claim] An attachment according to claim 20, wherein said front surface is a straight non-curved surface from 2 to 24 feet in length;